Amendment to the Claims:

1. (Cancelled)

2. (Currently Amended) [[A]]The method according to claim 29[[1]], wherein said at least two frame portions of said frame of said audio-visual signal respectively comprise patterns of horizontal lines of said audio-visual signal frame.

3. (Currently Amended) [[A]]The method according to claim 29[[1]], wherein said steps of calculating and embedding are repeated until a said signature is embedded for all regions of said frame.

4. (Cancelled)

5. (Currently Amended) [[A]]The method according to claim 29[[1]], wherein said audio-visual signal is an interlaced signal and said first portion comprises one of all even or odd lines and said second portion comprises all remaining odd or even lines not included in said first portion.

6. (Currently Amended) [[A]]The method according to claim 29[[1]] whereby said audio-visual signal is a non-interlaced signal and said first and second frame portions comprise consecutive slices of said audio-visual signal, wherein each of said consecutive slices are further comprised of a group of consecutive lines of said frame.

7. (Currently Amended) The method according to claim 29[[1]], wherein the embedded signature comprises a watermark.

8. (Original) The method according to claim 7 whereby the watermark is embedded as a spread spectrum watermark.

9. (Original) The method according to claim 7, whereby the watermark is embedded in a different portion of said frame than the portion of said frame for which said signature is generated.

10. (Cancelled)

11. (Currently Amended) The method according to claim 29[[1]] ~~whereby~~ wherein the steps of calculating and embedding said signature are performed in real-time.

12-16. (Cancelled)

17. (Currently Amended) The method according to claim 29[[1]], wherein the first and second portions are selected based on said audio-visual signal being one of an interlaced or a non-interlaced signal.

18. (Previously Presented) The method according to claim 17, wherein said audio-visual signal is said interlaced signal, said first portion comprising odd lines of the frame of said audio-visual signal and said second portion comprising even lines of the frame of the audio-visual signal.

19. (Previously Presented) The method according to claim 17, wherein said first and second portions each comprise a pattern of horizontal lines of said audio-visual signal, each of said patterns of consecutive horizontal lines having fewer lines than the entire audio-visual signal.

20. (Previously Presented) The method according to claim 17, wherein said audio-visual signal is said non-interlaced signal, said first portion comprising an upper half of said frame of said audio-visual signal and said second portion comprising a lower half of said single frame in the case.

21. (Cancelled)

22. (Cancelled)

23. (Currently Amended) An~~The~~ apparatus ~~of Claim 22, wherein said processor further performs the steps of:~~ comprising:

an input into which an audio-visual signal is fed from a capture device, said signal being comprised of a plurality of sequential frames, each of said plurality of sequential frames being comprised of at least first and second frame portions;

a memory connected with the input for sequentially storing each of the at least first and second frame portions of each of the frames of said audio-visual signal, thereby allowing for a reduced memory requirement relative to storing an entire frame of said audio-visual signal;

a processor programmed to perform the steps of:

calculating a signature based on a first portion of said frame of said audio-visual signal currently stored in the memory,

embedding the signature calculated based on the first frame portion in the second frame portion stored in the memory subsequently to the first frame portion such that the signature is embedded in a different portion of the frame than a portion of the frame from which it is calculated,

while the second frame portion is stored in said memory, calculating a signature based on the second frame portion for embedding in a subsequent frame portion to be stored in the memory subsequent to the second frame portion; and

an output from which the frames with the embedded signatures are outputted.

24. (Previously Presented) The apparatus according to claim 23, wherein said first and second frame portions comprise patterns of horizontal lines of said audio-visual signal, said patterns having fewer lines than the entire audio-visual signal.

25. (Currently Amended) The apparatus according to Claim 2322, wherein the capture device includes a camera.

26. (Previously Presented) The apparatus according to Claim 25, wherein the camera is a medical imaging camera.

27. (Currently Amended) A computer readable medium having thereon computer readable instructions which control one or more computers to perform the steps of:

storing a first portion of a frame of an audio-visual signal, ~~wherein said frame is comprised of at least two frame portions, thereby allowing for a reduced memory requirement,~~

calculating a first signature based on the stored first frame portion, ~~and~~

storing a second frame portion,

embedding the first signature in [[a]] the second frame portion of the frame so that the signature is embedded in a different portion of the frame than a portion of the frame for which the signature is generated,

calculating a second signature based on the stored second frame portion,

storing a third frame portion, and

embedding the second signature in the third frame portion ~~thereby reducing~~ wherein a memory size for authenticating the frame is reduced from a size of the frame to a smaller size matched ~~in size~~ to ~~the larger~~ a largest of the first frame portion [[or]] the second frame portion, or the third frame portion.

28. (Currently Amended) A method of embedding a signature in an audio-visual signal comprising the acts of:

dividing a frame of the audio-visual signal into at least three ~~equal sized~~ slices;

storing a first slice of the slices in a memory having a capacity which is equal to a size of [[the]]a largest of the slices;

calculating a first signature based on the first slice stored in the memory;

replacing the first slice in the memory with a second slice; [[for]]

calculating a second signature of the second slice; [[and]]

embedding the first signature in the second slice so that a signature is embedded in a different slice than a slice of the frame for which the signature is generated;

replacing the second slice in the memory with a third slice;

embedding the second signature in the third slice; and

wherein a memory size for authenticating the frame is reduced from a size of the frame to ~~substantially~~ a size of the largest of the slices.

29. (Currently Amended) [[The]]A method ~~according to claim 1, wherein the step of~~ of embedding a signature in an audio-visual signal for authentication of said audio-visual signal, said signal being comprised of a plurality of sequential frames, each of said plurality of sequential frames being comprised of at least two frame portions, the method comprising the steps of:

loading a first frame portion of a frame of said audio-visual signal in a buffer memory, thereby allowing for a reduced memory requirement relative to storing an entire frame of said audio-visual signal,

calculating [[the]] a signature ~~is~~ based on an image property including at least one of DC value, edges, or moments and based on the first frame portion of said frame of said audio-visual signal,

loading a second frame portion of the frame replacing the first frame portion in the buffer memory, the reduced memory requirement being equal in size to a larger of the first frame portion or the second frame portion,

embedding the signature in the second frame portion of the frame such that the signature is embedded in a different portion of the frame than a portion of the frame from which the signature is calculated.